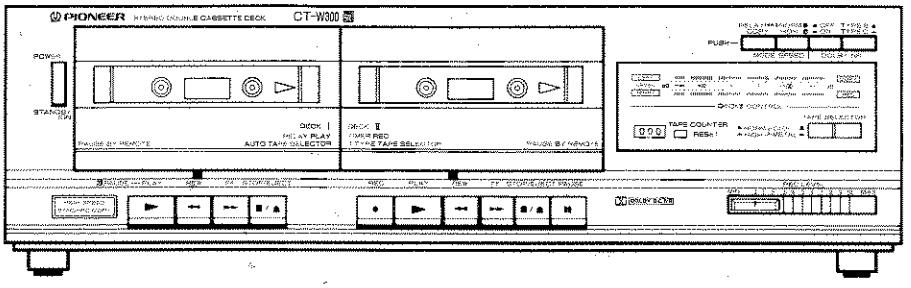
MASTER

Operating Instructions

STEREO DOUBLE CASSETTE DECK

CT-W300



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

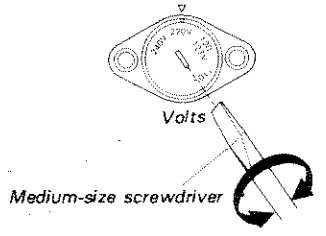
The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep in a secure area. This is for your security.

LINE VOLTAGE

Only multi-voltage models are provided with this switch. U.S., Canadian, European, U.K., and Australian models are not provided with this switch.
Main voltages in Saudi Arabia are 127V and 220V only. Never use this model with 110V setting in Saudi Arabia.

The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC outlet. If the voltage is not properly set or if you move to an area where the voltage requirements differ,adjust the selector switch as follows.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value of your area.



"This product is manufactured to comply with the radio interference requirements of EEC Directive 76/889/EEC and 82/499/EEC."

PIONEER®
The future of sound and vision.

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.

HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION — The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.

VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES — An outdoor antenna should be located away from power lines.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

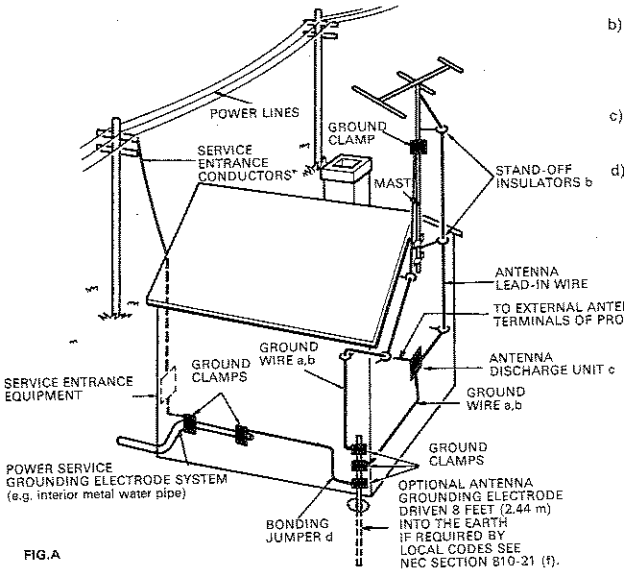

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
ANTENNA DISCHARGE UNIT c
SERVICE ENTRANCE EQUIPMENT
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
BONDING JUMPER d

FIG.A

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

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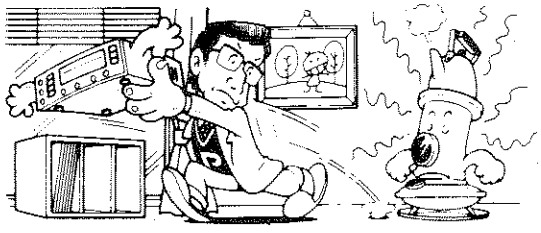
INSTALLATION

When installing the deck, avoid locations with high temperature or humidity, and be sure that the location is well ventilated.

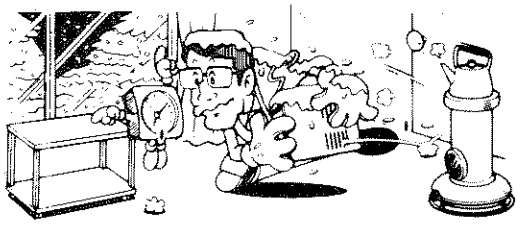
Do not install the deck in locations subject to direct sunlight, or next to a space heater or other heating device, since the finish or internal parts may be affected adversely. Malfunctions may also result if the unit is installed in a humid or dusty location. Also avoid installations next to kitchen counters or other places subject to oily smoke or heat.



- If you place the unit directly on top of an amplifier, it may pick up humming or other noise. Also, if the amplifier generates a large amount of heat, the unit may break down.
- If you place the unit near a television set, it may pick up noise which may be recorded as a whistling tone on the tape. In such a case, either install the unit away from the television set or switch OFF the television set.

DEW CONDENSATION

When the unit is moved from a cold to a warm room, or the temperature changes quickly, condensation will form on the mechanical parts and this will affect the performance of the tape. In such cases, leave the unit in a warmer atmosphere for about one hour or change the room temperature gradually.



NOTE:
When installing the tape deck, do not place a cloth over the top or block the ventilation openings in any other way.

INFORMATION TO USER [FOR U.S. MODEL]

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate this equipment with respect to the receiver
- move this equipment away from the receiver
- plug this equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems".
This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

The above instructions apply only to units which will be operated in the United States.

CONNECTIONS

- **Read through the operating instructions of the stereo components which you intend to connect to this unit.**
- **Turn on the power only after all the connections are completed.**
- **Make sure that the plugs are inserted securely. Improper connection may generate noise.**

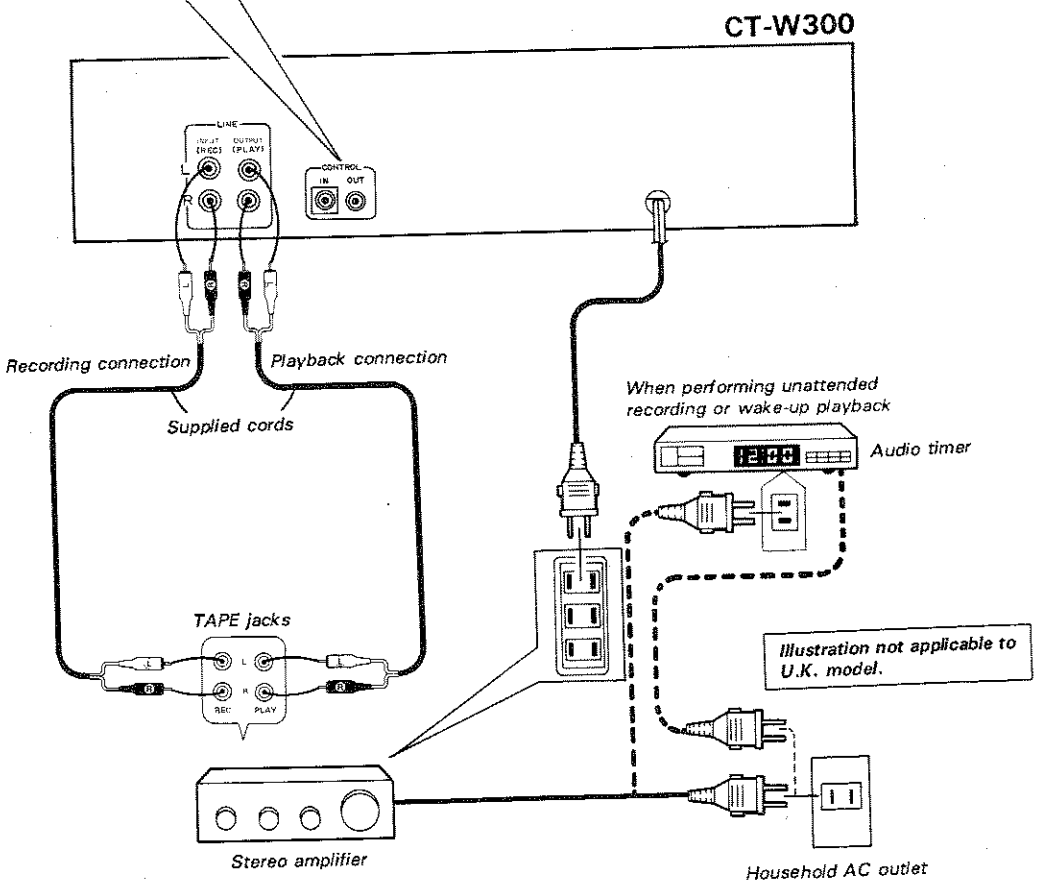
(Not provided with the U.K. and European models.)

CONTROL IN jack

Connect this jack to the CONTROL OUT jack of a component equipped with the Pioneer System Remote Control (bearing the SR mark) using a regular mini-plug cord, and you will be able to operate the PAUSE function of this component using the system remote control.

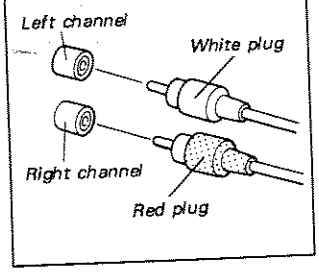
CONTROL OUT jack

Intermediary output of remote control signals from the above input jack. Connect it to the CONTROL IN jack of another component compatible with the Pioneer System Remote Control.

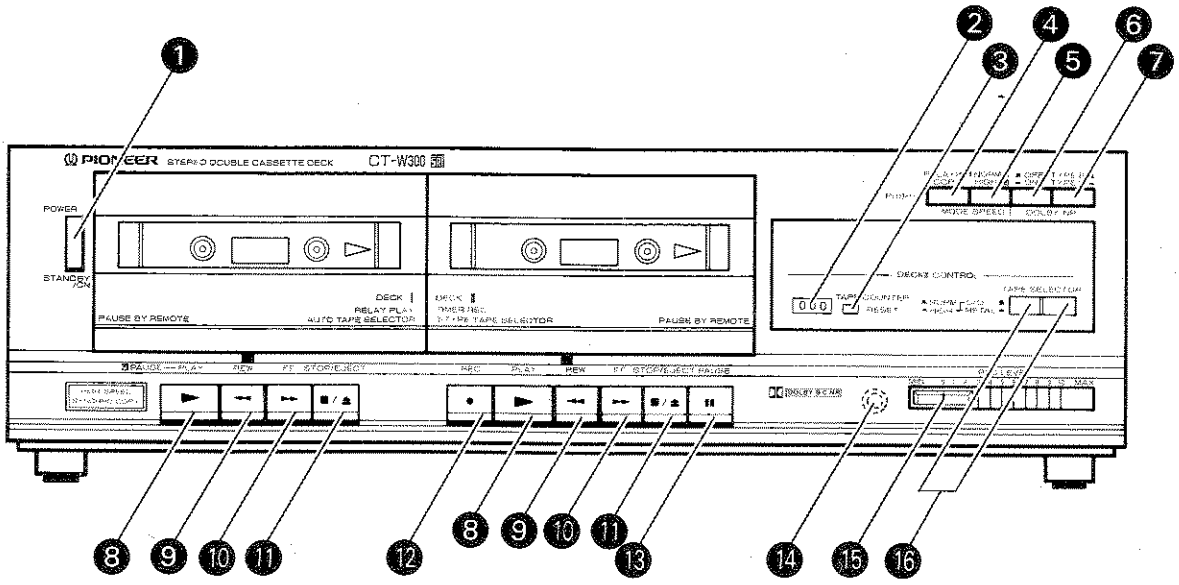


Connecting the input/output cords

Connect the plugs properly.



FRONT PANEL FACILITIES



The illustration shows the display for the U.S. model.

❶ POWER (STANDBY) switch

NOTE:

- *The unit's POWER switch is geared to selecting the transformer's secondary and so even at the STANDBY position, the unit's circuitry will work as long as the power cord is connected to a power outlet.*
- *For U.S. and Canadian models: when turning on the power, the unit will be inoperative for about 3 seconds.*

❷ TAPE COUNTER (DECK II CONTROL)

Indicates the transport position of the tape loaded in Deck II only.

❸ COUNTER RESET button

Resets the tape counter reading to "000".

For U.S., Canadian and Saudi Arabian models

❹ MODE switch (RELAY I◄ ►II/COPY)

Use this switch for the following operations:

RELAY I◄ ►II:

This position is used for relay playback. The unit is set to relay playback mode, when the COPY indicator is not displayed. In this mode relay playback from Deck I to Deck II or Deck II to Deck I is possible by pressing the PLAY button of one deck and then the PLAY button of the other deck. (See page 9.) For normal playback the unit must be set to relay mode.

COPY:

In this mode tape copying from Deck I to Deck II is possible. The unit is set to copy mode when the COPY indicator is displayed. Deck I is for playback and Deck II is for recording. (See page 10.)

❺ SPEED switch (NORM ■ /HIGH ◩)

NORM	■	Lights
HIGH	◩	Flashes

Press this switch to select the desired tape speed for copying. High speed is selected when the COPY indicator flashes. Normal speed is selected when the indicator lights continuously.

For U.K. and European models

❹ MODE switch (■ RELAY/ ▬ COPY)

Operates as ❹ above, but is a locking switch which is pressed and released.

NOTE:
When not performing tape copy, be sure to set the MODE switch to RELAY (■) position. If the MODE switch is in the COPY (▬) position, normal recording (of program from the LINE INPUT terminal) will not be possible.
When the MODE switch is in the COPY (▬) position, the PLAY, Fast Forward, and Rewind buttons of Deck I will not function unless Deck II is in the recording or recording standby status. When the MODE switch is in the RELAY (■) position, relay play can be performed only from Deck II to Deck I. When the MODE switch is in the RELAY (■) position, if the PLAY button or REC button (Deck II only) of one deck is pressed, the PLAY, Fast Forward, and Rewind buttons of the other deck will not function.

❺ SPEED switch (■ NORM/ ▬ HIGH)

Operates as ❺ above, but is a locking switch which is pressed and released.

NORM (■):
Tapes are copied at the normal speed.

HIGH (▬):
Pressing this switch will cause high-speed copying to take place only when the unit is in the tape copy mode.

❻ DOLBY NR* switch (■ OFF/ ▬ ON)

Press this switch to ON (▬) for recording with the built-in Dolby Noise Reduction system and for playback of tapes which have been recorded using the Dolby Noise Reduction system. For other tapes, do not press this switch.

*

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"Dolby" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.*

❼ DOLBY NR switch (TYPE ■ B/ ▬ C)

After the DOLBY NR switch (ON/OFF) is pressed, select type B or C using this switch.

NOTE:
When playing back Dolby NR-encoded tapes, always set this switch to the same position (B or C) used for recording.

❽ PLAY button (►)

When this button is pressed, the side of the tape facing outward (side A or B) will play.

❾ REW button (◄◄)

To rewind the tape in the direction of the arrows. This winds the tape onto the left reel of the cassette.
Press the STOP/EJECT button when the end of the tape is reached. The auto stop function does not operate when the tape is wound at high-speed.

❿ FF button (►►)

To fast-forward the tape in the direction of the arrows. This winds the tape onto the right reel of the cassette.
Press the STOP/EJECT button when the end of the tape is reached. The auto stop function does not operate when the tape is wound at high-speed.

⓫ STOP/EJECT (■ / ▲) button

The cassette compartment door will open when this button is pressed while the tape is stopped. Pressing it while the tape is running will stop the tape.

⓬ REC button (●)

The deck cannot be placed in the recording mode if a cassette with broken erasure prevention tabs is loaded, or if no cassette tape is loaded.

⓭ PAUSE button (▮▮)

Press to temporarily stop the tape travel. To restart the tape travel, press once again. The pause function does not operate when the deck is in the fast forward or rewind mode.

⓮ PHONES jack

This jack is provided only on the European and U.K. models. U.S. and Canadian models are not provided with this jack.

⓯ REC LEVEL control

⓰ TAPE SELECTOR switches (DECK II only)

This selector allows the bias and equalizer characteristics to be selected during recording, and equalizer characteristics during playback, in line with the type of tape you are using on Deck II.

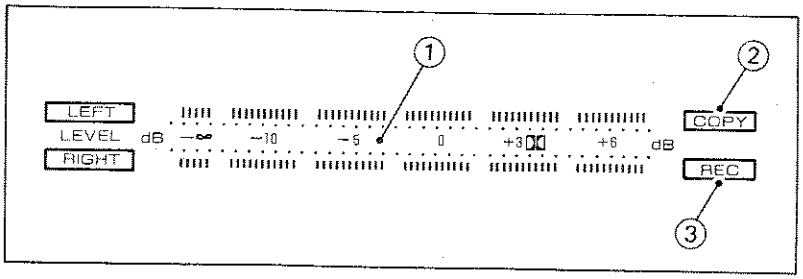
Normal tape:
Release the left switch (■ NORM).

CrO_2 tape:
Press the left switch (▬ HIGH) and release the right switch (■ CrO_2).

Metal tape:
Depress both the right and left switches (▬ HIGH, ▬ METAL).

NOTE:
Deck I is provided with an automatic tape selector mechanism.

OPERATING DISPLAY



① **Level Meter**
The ▯▯ beside the +3 dB mark indicates the Dolby NR system standard level.

For U.S., Canadian and Saudi Arabian models

② **COPY indicator:**
This indicator lights in the copying mode.

Normal-speed: lights up
High-speed: flashes

For European model

② **COPY indicator:**
This indicator lights in the copying mode.

③ **REC indicator:**
This indicator lights in the recording mode.

RECORDING

RECORDING (Deck II only)

Erasure prevention tabs

The REC button does not work when the erasure prevention tabs of a loaded cassette tape have been broken off (See page 12). Do not attempt to press the REC button with unreasonable force.

1. **Set the MODE switch to the RELAY position. (The COPY indicator is not displayed.)**
2. **Load a recording tape.**
3. **Set the DOLBY NR switches and TAPE SELECTOR switches.**
4. **Prepare the program source which you intend to record. Operate the stereo amplifier and prepare it for playback of the desired melody.**
5. **Press the PAUSE button, followed by the REC button to place the deck in the recording standby mode.**
6. **Adjust the recording level.**
   For details, refer to "ADJUSTING THE RECORDING LEVEL."
7. **Press the PAUSE button to begin recording.**

For U.S. and Canadian models

The REC indicator flashes during the recording standby mode.

ADJUSTING THE RECORDING LEVEL

The adjustment of the recording level is the most important factor in achieving good recording results. A high level is good for the signal-to-noise ratio and the dynamic range, but an excessively high level distorts the sound. If the level is made too low for fear of sound distortion, irritating tape hiss will mar the recording. Depending on the manufacturer and the type of tape, the characteristics of a tape differ even when the same kind is used. Making a setting just near the maximum recording level for the tape type will do full justice to the tape characteristics and result in a good-quality recording.

Adjust the REC LEVEL control so that the level meter's "0 dB" just lights. No harm will be done if the "+3 dB" indicator lights momentarily at peaks. (When using metal tapes, it is permissible for the "+6 dB" indicator to light momentarily.)

NOTE:

- *The ▯▯ mark on the level meter indicates the reference level for the Dolby NR system.*
- *In reality, the optimum recording level may differ somewhat, depending on the music source and type of tape used. In order to deliver the best results of which your tapes are capable and to produce better recordings, set the recording level after actual testing, by listening carefully to the sound produced and adjusting it to a level most pleasing to you.*
- *The level meter may react differently during recording and playback of the same music tape. This is due to differences in tape sensitivity, and creates no problem so long as the variation is not severe.*

DOLBY NR SYSTEM

This unit features a dual noise reduction system (Dolby NR B and C systems).

Dolby NR system

The Dolby NR system is designed to reduce the amount of tape hiss, mainly in the treble components. During recording, the high-pitched pianissimo sounds which are most characteristic of audible noise are boosted, and during playback these boosted sections only are attenuated so that the tape sound is returned to normal. As a result, the noise is attenuated by an amount equivalent to the boosting in the treble range.

The Dolby NR B system serves to reduce noise in the treble range by cutting tape hiss and expanding the dynamic range. The Dolby NR C system is even more effective than the B in reducing noise as it cuts the noise from the mid-range on.

NOTE:

When a tape has been recorded using the Dolby NR B or C system, make sure that the same DOLBY NR switch position is selected when it is played back.

PLAYBACK

SINGLE PLAYBACK (Deck I or Deck II)

1. **Set the MODE switch to the RELAY position. (The COPY indicator is not displayed.)**

2. **Load a pre-recorded tape in Deck I or II.**

3. **Set the DOLBY NR switches.**

4. **Set the TAPE SELECTOR switches.**
- Perform this setting only for playback on Deck II.
- For playback on Deck I, an auto tape selector is provided, hence there is no need to set the TAPE SELECTOR switches.

5. **Press the PLAY button of Deck I or II.**

RELAY PLAYBACK (Continuous play Deck I ⟷ Deck II)

When the tape loaded in Deck I reaches its end and stops, Deck II enters the playback mode.
The same applies to the opposite direction (Deck II to Deck I).

1. **Set the MODE switch to the RELAY position. (The COPY indicator is not displayed.)**

For U.K. and European models only

NOTE:
Do not press the MODE switch during relay playback. If the MODE switch is pressed and set to COPY (▬), the relay playback mode will be cancelled.
With the European model relay playback can be performed from Deck II to Deck I only.

2. **Load pre-recorded tapes.**
Load the tapes in Deck I and II which have both been recorded with the same Dolby NR mode.

3. **Set the Dolby NR switches.**

4. **Set the TAPE SELECTOR switches (for playback on Deck II).**

5. **Press the PLAY button for the deck in which the tape to be played first is loaded, then press the PLAY button of the other deck.**

When the end of the first tape is reached, the corresponding deck stops and the other deck automatically starts playback.

AUTO-STOP MECHANISM (Deck I and Deck II)

- When the tape is fully wound onto one of the reels during recording or playback, the auto-stop mechanism will be activated without the STOP/EJECT (■ / ⏏) button having to be pressed, and the tape will automatically stop.
- When fast forwarding or rewinding the tape with this unit, the auto-stop mechanism will not work. Therefore, make sure to depress the STOP/EJECT (■ / ⏏) button when the tape has been fast forwarded or rewound.

TAPE COPYING

[From Deck I to Deck II]

- The tape copying function permits you to copy the contents of a tape in Deck I to Deck II.
- The SPEED switch (NORM/HIGH) is used to select either normal-speed copying (to listen to playback as a tape is being copied) or high-speed copying (the tape is copied at twice the normal playback speed).

1. **Load a playback tape into Deck I and a blank tape into Deck II.**

2. **Set the DOLBY NR switches to match the tape in Deck I, and the TAPE SELECTOR to match the tape in Deck II.**

For U.K. and European models

3. **Set the MODE switch to the COPY (▬) position. (The COPY indicator is displayed.)**
4. **Set the SPEED selector to the NORM (■) of HIGH (▬) position.**

For U.S., Canadian, Saudi Arabian and Australian models

(Non-locking switch)

3. **Select the COPY mode using the MODE switch.**

4. **Select normal-speed or high-speed using the SPEED switch.**

   NORM: COPY indicator lights.
   HIGH: COPY indicator flashes

NORM:
Tape copying at normal speed for listening to playback.

HIGH:
Tape copying at twice the normal speed.

NOTE:
DURING HIGH-SPEED COPYING:
When performing high-speed copying with this unit, if a television is on nearby, a high-pitched interference sound may be heard on the recording. In this case, either use the normal-speed copying function, or turn off the television.

5. **Press the PLAY button of Deck I.**

Playback will not begin immediately, but the deck will enter the standby mode.

6. **Press the REC button of Deck II.**

At the same time that Deck II begins recording, Deck I will begin playback.

For U.S., Canadian and Saudi Arabian models

Syncronized copy start is also possible by first pressing the REC button for Deck II and then the PLAY button for Deck I.

NOTE:
DURING TAPE COPYING:

- *When repeating the tape copying, be sure to leave the original tape in Deck I. Making a copy of a copy will result in lower sound quality.*
- *When making tape copies, adjustment of the recording level is not required.*
- *When performing tape copying, be sure to use tapes of the same length.*
- *When performing tape copying, the copy will be produced with the same noise reduction effects as those used on the original tape, regardless of the position of the noise reduction switches. For example, if the original tape was recorded with the Dolby C noise reduction, the copy will be produced with the same Dolby C noise reduction effects.*
- *If a tape prerecorded at a high recording level is loaded in Deck I, and a blank tape with a low saturation level is loaded in Deck II for copying, the resulting sound may be distorted.*
- *The playback sound output from the LINE OUTPUT terminals during copying is to enable you to check the COPY operation. Consequently, it may sometimes differ slightly from the original sound.*

For European models

- *Do not change the SPEED switch position during tape copying.*

For U.S. and Canadian models

- *If the SPEED selector is pressed while copying, the tape speed does not change.*
- *If the PLAY button of Deck II is pressed in the COPY mode, the COPY mode is cancelled, and Deck II is set to PLAY mode.*
- *COPY and SPEED can be changed only when both decks are set to STOP mode (including FF and REW).*

TIMER RECORDING/PLAYBACK

UNATTENDED RECORDING (Deck II only)

1. **Set the POWER switch to ON.**
2. **Load the tape to be unrecorded.**
3. **Set the DOLBY NR switches and TAPE SELECTOR switches.**
4. **Set the MODE switch to RELAY position.**
   (The COPY indicator is not displayed)
5. **Tune in the desired station with your stereo tuner.**
6. **Press the PAUSE button followed by the REC button to set to the recording standby mode.**
7. **Adjust the recording level.**
8. **Set the audio timer.**

When this is done, the audio timer will turn all connected components off.

9. **Release the PAUSE button**

At the time set on the audio timer, the power will be turned on, and recording will begin automatically.

For U.S., Canadian, Saudi Arabian and Australian models

When the unit is supplied with power, it takes about 3 seconds for the recording to start. During this time, the REC indicator flashes.

WAKE-UP PLAYBACK (Deck I and Deck II)

1. **Set the POWER switch to ON.**
2. **Load a pre-recorded tape.**
3. **Set the DOLBY NR switches.**
4. **Set the TAPE SELECTOR switches.**

Set when performing wake-up playback on Deck II.

5. **Set the MODE switch to RELAY position.**
   (The COPY indicator is not displayed)
6. **Press the PLAY button.**
7. **Adjust the VOLUME control at the stereo amplifier.**
8. **Rewind the tape to the position where playback is to start.**
9. **Set the audio timer.**

When this is done, the audio timer will turn all connected components off.

10. **Press the PLAY button.**

At the time set on the audio timer, the power will be turned on and playback will begin automatically.
If tapes are loaded in both decks and both PLAY buttons are pressed, the unit will perform relay playback. (see page 9)

Operations may vary depending on the audio timer used; be sure to consult the operating instructions for the audio timer you actually employ.

NOTE:
Do not set the timer for audio timer recording or playback 24 hours or more in advance.

For U.S., Canadian and Saudi Arabian models

PAUSE OPERATION WITH THE SR REMOTE CONTROL

When using this unit together with a Pioneer system component bearing the SR mark, the pause function can be activated with the remote control unit of that component. For remote control this unit must be connected to the system component with the supplied control cord. (Refer to CONNECTIONS on page 4 and the respective section in the operating manual of the other component.)

- Pause operation by remote control is possible for either Deck I (playback) or Deck II (playback or recording). (The operation is also possible when performing relay playback from Deck I to Deck II or from Deck II to Deck I.) The deck currently operating will be set to PAUSE.
- When copying tapes (from Deck I to Deck II), only the PAUSE function of Deck II (RECORDING) can be remote controlled.

HOW TO HANDLE CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading cassette tapes.

Is the tape loose, or is some of the tape outside the cassette?

If some of the tape is projecting outside the cassette shell or if it is loose, it may not enter between the capstan and pinch roller. This will prevent the tape from being supplied or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack (Fig. A.).
Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

What are the accidental erasure prevention tabs for?

A cassette is provided with these tabs so that important or otherwise valuable recordings will not be erased accidentally.
When the tab (Fig. B) on the cassette shell is broken off with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) button, so valuable recordings will not be erased in error.
To re-record a cassette on which tabs have been broken off, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.
In case of metal tape or chrome tape, take sufficient care that the detection hole (Fig. D, Fig. E) is not blocked.
When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

NOTE:

- *The accidental erasure prevention tabs are located at the top left on both sides A and B (1 or 2), so that material on each side can be prevented from being erased in error.*
- *When breaking off the tab on the cassette shell do not use a magnetized screwdriver.*

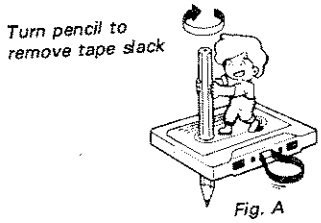


Fig. A

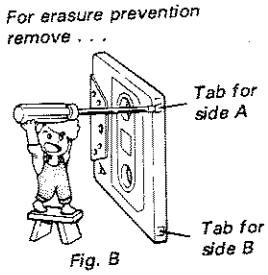


Fig. B

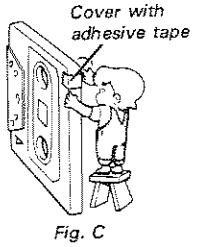


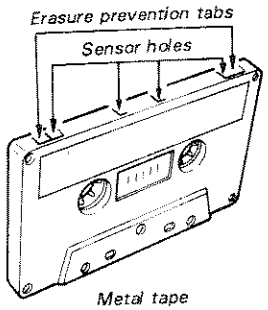
Fig. C

AUTOMATIC TAPE SELECTOR FUNCTION

This unit (Deck I) is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape recording bias and equalization.

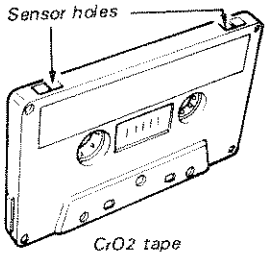
REGARDING THE TAPE CASSETTE SENSOR HOLES

- Do not use FeCr tapes with this unit.
- When using metal tapes, be sure the tape cassettes have sensor holes.



Metal tape

Fig. D



CrO2 tape

Fig. E

TIPS ON USING CASSETTE TAPES

- Leader tape (which does not allow sound to be recorded on it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for about 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt and oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit.

MAINTENANCE

CLEANING THE HEADS, PINCH ROLLERS AND CAPSTANS

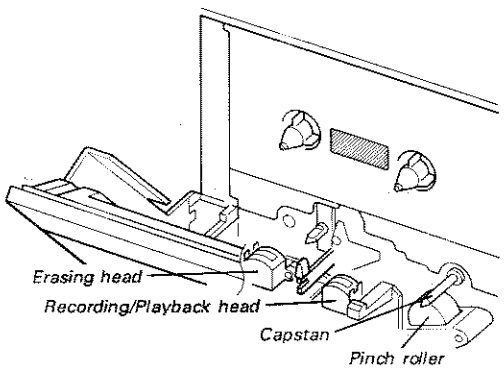
The heads, pinch rollers and capstans are parts which are liable to get dirty quite easily. In particular, if the heads are dirty, the high-frequency components are not reproduced and the stereo balance is impaired, resulting in a deterioration of the playback sound. It is therefore recommended that the head section be cleaned regularly.

1. Depress the STOP/EJECT button and open the cassette door.
2. Dip the cleaning swab into the cleaning fluid and use it to wipe the heads, capstans and pinch rollers.

To clean the pinch roller while it is rotating:

Press the PLAY button.

- After rotating and cleaning the pinch roller, press the STOP/EJECT button. The cassette door will not close unless the stop mode has been set.



NOTE:
Do not load a tape after cleaning the head section until the cleaning fluid has completely dried (this takes two or three minutes).

DEMAGNETIZING THE HEADS

After using the cassette deck over a period of time, the heads will become magnetized. The same effect is also caused by bringing a screwdriver, magnet or other magnetized object too close to the heads. This causes loss of high-frequency sound during recording and playback, and is also a cause of interference noise. The heads should be regularly demagnetized with a head demagnetizer (eraser) which can be purchased at dealer shops.
When demagnetizing the heads, be sure the cassette deck POWER switch is in the STANDBY position. For detailed instructions, consult the operating manual for your head demagnetizer (eraser).

CLEANING THE FRONT PANEL SECTION

Wipe the front panel and the cassette door when dusty or greasy with a soft cloth containing a small amount of ordinary liquid soap. Then, wipe dry with a cloth. Never use volatile spirits like thinners, benzine or alcohol because they will damage the panel finish.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Probable Cause	Remedy
POWER		
Cannot turn power on.	• The power plug is removed. • The component (stereo amplifier, audio timer, etc.) to which the power cord is connected is off.	• Insert the power plug correctly. • Turn the stereo amplifier or audio timer on.
CASSETTE DOOR		
The door does not open.	The deck is not in stop mode (tape is moving).	Press the STOP/EJECT (■ / ▲) button.
The door does not close.	The cassette is not properly loaded.	Reinsert the cassette.
PLAYBACK		
Immediately stops.	The tape is completely wound.	Rewind the tape.
The level meter does not work.	• The tape is not recorded. • The tape head is dirty.	• Replace the tape with a recorded one. • Clean the head (see page 13).
No sound	• The amplifier input selector is not correctly set. • The amplifier volume level setting is too low. • Connection problems (wrong connection, cord removed, poor contact, broken wire).	• Set the amplifier input selector correctly. • Turn the amplifier volume control up. • Connect securely.
RECORDING		
The recording button can not be depressed.	The cassette erasure prevention tabs are broken.	Replace the cassette with one whose tabs are intact. Cover the erasure prevention hole with a double layer of adhesive tape (see page 12).
The level meter does not work.	• The REC LEVEL control is set too low. • The amplifier is not delivering a recording signal (from the tuner, CD player, etc.). • Wrong connection, connection cord removed, poor contact, broken wire.	• Turn the REC LEVEL control up. • Set the amplifier recording output selector correctly. • Check connections.
Immediately stops.	The tape is completely wound up.	Rewind the tape.
Cannot record	The head is dirty.	Clean the head (see page 13).

Symptom	Probable Cause	Remedy
POOR SOUND QUALITY		
Unstable or interrupted sound	• The head, pinch rollers and capstans are dirty. • The tape is not uniformly wound.	• Clean the head etc. (see page 13). • Completely fast-forward or rewind the tape.
No high frequencies	• A tape recorded without Dolby NR is being played back with the DOLBY NR switch in the B or C position. • The head is dirty.	• Set the DOLBY NR switch to OFF. • Clean the head (see page 13).
High frequencies are emphasized.	A Dolby-encoded tape is being played back with the DOLBY NR switch in the OFF position.	Set the DOLBY NR switch to the same position used for recording.
Sound from previous recordings remains when re-recording a tape.	The head is dirty.	Clean the head (see page 13).
The sound is distorted.	• Recording level is too high. • The recorded signal itself is distorted. • The head is dirty.	• Turn the REC LEVEL control down when recording (see page 8). • Replace the cassette. • Clean the head (see page 13).
Too much noise	• A noisy tape is being used. • Incomplete insertion of a connection cord, poor contact. • Recording level is too low. • The head is dirty. • The head is magnetized.	• Replace the cassette. • Check connections. • Turn the REC LEVEL control up when recording (see page 8). • Clean the head (see page 13) • Demagnetize with a head demagnetizer.
OTHERS		
Cannot use the remote control system	The control cord is not connected.	Connect the control cord.

SPECIFICATIONS

Systems . . . . . 4 track, 2-channel stereo
Heads . . . . . .
"Hard Permalloy" recording/playback head × 1
"Hard Permalloy" playback head × 1
Double-gap "Ferrite" erasing head × 1
Motor . . . . . DC servo motor × 2
Wow and Flutter . . . . . .
U.S. and Canadian models No more than 0.13% (WRMS)
European model No more than 0.08% (WRMS)
No more than ±0.19% (DIN)
Rewinding Time . . . . . Approximately 100 seconds (C-60 tape)

Frequency Response
−20 dB recording:
Normal tape . . . . . 35 to 15,000 Hz
Chrome tape . . . . . 35 to 16,000 Hz
Metal tape . . . . . 35 to 16,000 Hz
Signal-to-Noise Ratio
Dolby NR OFF . . . . . More than 56 dB
Noise Reduction Effect
Dolby NR B type ON . . . More than 10 dB (at 5 kHz)
Dolby NR C type ON . . . More than 19 dB (at 5 kHz)
Harmonic Distortion . . . . . No more than 0.8% (0 dB)
Input (Sensitivity)
LINE (INPUT) . . . . . 63 mV (Input impedance 52 kΩ)
Output (Reference level)
LINE (OUTPUT) . . . . . .
316 mV (Output impedance 7.7 kΩ)
PHONES (European, U.K. and Australian models) . . .
. . . . . 45 mV (Load impedance 8Ω)

Subfunctions

- Relay playback
  For U.S. and Canadian models: DECK I ◀ ▶ DECK II
  For U.K. and European models: DECK II → DECK I
- Synchronized copy start
- High-speed and normal-speed tape copying (DECK I → DECK II)
- Dolby NR B/C types
- Auto tape selector (DECK I)
- 5 segments LED level meter
- Automatic stop function (Recording, Playback)
- Timer standby function
  (Unattended recording: DECK II)
  (Wake-up playback: DECK I and DECK II)
- 3-digit mechanical tape counter (DECK II)
- PHONES jack (European model)

Miscellaneous

power Requirements
U.S. and Canadian models . . . . . AC 120V, 60 Hz
European model . . . . . AC 220V, 50/60 Hz
U.K. and Australian models . . . AC 240V, 50/60 Hz
U.S. military and other destination models . . . . . .
AC 110V/120-127V/220V/240V, 50/60 Hz (switchable)
Power Consumption
U.S. and Canadian models 18W
European, U.K. and Australian models 16W
U.S. military and other destination models 18W
Dimensions . . . . . 420(W) × 120(H) × 264(D) mm
16-9/16(W) × 4-3/4(H) × 10-3/8(D) in
Weight (without package) . . . . . 3.8 kg (8 lb 6 oz)

Accessories

Operating instructions 1
Connection cord with pin plugs 2
Control cord (not provided with the U.K. and European models)
. 1

NOTE:
Specifications and design subject to possible modifications without notice due to improvements.

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